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Original Communications.

THREE CASES OF SUNSTROKE.

By DAVID COGSIN, M.D., Saint Louis, Mo.

THE study of the pathology and treatment of sunstroke, or heat-fever, has been actively prosecuted for the last few years, and especially in the United States, where this affection is met with more frequently (owing, in part, perhaps, to the dryness of the atmosphere), and where, consequently, better facilities exist for its investigation than in any other civilized country.

In Central Europe sunstroke occurs with extreme infrequency, save among troops when undergoing their yearly drill, in time of peace, or when making long marches, in time of war. Riecke (*Der Tod durch den Sonnenstich*, Quedlinburg, 1855) gives a case where, at Bwerloo, near Brussels, in 1853, out of a body of infantry 600 strong, which left a training camp to march twelve miles, but 150 reached their destination—the rest succumbed to the heat, and many of them died. He states that during the Crimean war, 6000 Russians one day left Bukarest for Kimpira, but only 3000 arrived at the latter place, as the remainder had either been sunstruck or had become so greatly prostrated by the heat as to require removal by the ambulances from the roadside to the hospitals. The French army also furnished its proportion of victims to sunstroke by marching fourteen hours, in one day, in the intense heat, with nothing to drink to equalize the body-temperature by evaporation.

The details of the terrible dead-march from Berlin to Potsdam, as well as accounts of other disastrous marches, are doubtless familiar to all. In civil life, however, cases of sunstroke in the centre and north of Europe are of rare occurrence. This I learn from a letter recently received from Munich, in which one of the University professors says it is seldom met with in Germany, and that there are no new works

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published there upon this subject, but that the best treatises he is acquainted with "are of American origin."

It is probable that one thousand persons die annually in this country from the effects of heat, and medical men are therefore called upon to give particular attention to this disease, that their observations may increase the knowledge of its pathology and management.

The following history of a somewhat interesting case of insolation is copied from my case-book:—

CASE I.—Dennis C., 45 years of age. A well-built, Irish laborer, of temperate habits, came from England, where he was employed in a dock-yard, one month before date, June 25th, 1870. For ten days previous to illness he had been much overcome by the intense heat then prevailing, and had complained, so his brother stated, of general weakness, loss of appetite, *malaise*, and a "heavy feeling in his head," yet he had worked hard at haying, for the last four days, on an estate in Hingham. On this day he labored under a hot sun till noon, when he ate his dinner of bread, cheese and two eggs. Was very thirsty during the morning, and drank freely of molasses and water flavored with vinegar and ginger. After resting two hours he resumed his work. At 4 o'clock, P.M., his head felt so badly that he started to lie down under a tree, but staggered on reaching it, and fell to the ground insensible.

When seen by me, at 5 o'clock, he was in a state of coma. Eyes fixed. Pupils contracted, the right more than the left; neither responded to light. Face not noticeably pallid. Pulse infrequent, full and hard. Respiration somewhat stertorous. Auscultation revealed no abnormal sounds in chest. Temperature seemingly much increased. Tremor of tongue (seen through gaping mouth) and convulsive twitching of legs. Patient, resting on the spot on which he had fallen, had not been moved, except to raise his head and apply ice to it. Constant fanning of face and sponging with iced water, by persons present, till and after my

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arrival. Spirits of camphor, with water, had been administered, which was followed by regurgitation of wind, while more also passed per anum. At 5.30, vomited undigested dinner, which act was preceded by the involuntary emptying of bladder and rectum. Fifteen minutes later, the breathing was no easier, and, as the violent beating of carotid and temporal arteries still continued, about six ounces of blood was taken from the right median cephalic vein, the color of which was uncommonly dark and the current slow. At 6.00, pulse 132, soft and irregular. Resp. 40, and less stertorous. With difficulty he was made to swallow two ounces of sherry (the only available stimulant) in teaspoonful doses. No other signs of returning consciousness. Continuance of convulsive movements. Vomited again slightly. Wine given at intervals. Patient was laid on hay in a spring wagon, and taken to his home at 8.30—one and a half mile distant. At 9, P.M., five hours after the sunstroke, temp. in axilla, 103°. Pulse 96 to 100. Pupils dilated. Muscular tremor gone. Tongue protruded at request. On being aroused, he said "good night," but at once relapsed into a state of stupor. Gave half an ounce of whiskey, and ordered the same amount to be often repeated.

June 26th.—Became conscious at 1.00, A.M.; was dressed and helped up stairs and to bed. Appearance of face and eyes normal. Pulse 80, and full. Temp. 100. "Head heavy"—inclined to sleep. Remembers nothing of events of yesterday after he started for the tree, when pain in head became very severe. Feels "well enough to go to work."

27th.—Is up and about. Head still heavy. Pulse 80. Temp. 100. Grayish-white tongue. Dejection from bowels yesterday.

July 1st.—"Head don't feel right yet." Mind not affected. Pulse 76. Temp. 99°. General condition pretty fair. Is now quite deaf; the watch is heard in the right ear only on contact, in the left ear at two inches distance. He felt some impairment in hearing in the right ear soon after embarking on ship from England, but then heard well with the left ear. Whether this sequela of his attack was permanent or not, is unknown, as, by the removal of the patient from town, the further history of this case was lost.

The phenomena presenting themselves in this case are analogous to those met with in congestive apoplexy. There were no symptoms denoting extravasation, if we except the subsequent loss of hearing,

which was not observed till some days after the stroke. On this day the air was sultry, and the temperature exceeded 85°F., above which sunstroke is liable to prevail. The warmth and closeness of the atmosphere (which perhaps contained a relatively small proportion of oxygen) probably retarded the de-carbonization of the blood in the lungs. We know that when the absorption of oxygen is impeded or diminished, the blood becomes dark or venous, as in cyanosis. This condition of the blood was noticed in the patient referred to, and strikingly so on bleeding him. Had death ensued, an autopsy would doubtless have revealed a dark color of the muscles and a congested state of the lungs, heart, brain and abdominal viscera, the blood dark and tar-like, and having the same general appearance and the same tendency to rapid decomposition that is met with, as Riecke asserts, in the bodies of persons who have died by carbonic oxide, lightning, drowning, hanging and cholera.

This patient had but recently arrived in this country and was not acclimated, and was therefore all the more liable to heat-fever, as are firemen or bakers before they become habituated to great heat. On this day, the air being at rest and the temperature high, he was not only deprived of a fresh breeze which might have brought respirable air to his lungs, but the increased degree of body heat was kept up by the absence of currents of air which if present would have diminished it by evaporation. As stated above, he partook liberally of liquids, and he also perspired freely. His head was protected from the sun by a light, porous hat.

It is possible that the high body-heat and congestion observed in this affection may be due to a neurosis of the sympathetic, by which its influence in maintaining a normal tonicity of the bloodvessels is affected.

Though venesection is generally considered as uncalled for and even pernicious in the treatment of sunstroke, it seems to me that in plethoric patients the withdrawal of blood relieves the labored action of the lungs and diminishes the distention in the right side of the heart as well as in the cerebral vessels. The condition of this patient was without doubt improved after he was bled, and I should pursue the same course of treatment if a similar case should come under my care.

I endeavored in this case to lessen the calibre of the vessels of the head by the application of ice, and had the facilities been at hand I should have given the pa-

tient a bath of mustard-water, the temperature of which should have been about 100°F. This plan would have brought down the body-heat and at the same time increased the amount of blood in the superficial vessels, and just so far relieved those of the brain.

The proposal recently advanced, that the patient should be placed in a decidedly cold bath and allowed to remain in it sufficiently long to noticeably reduce his body temperature, would, if followed, unquestionably diminish the temperature, but by the action of cold upon the surface the internal congestion would be greatly augmented, and this alone, setting aside the depressing effect of continued cold, would apparently aggravate the already dangerous state of the patient. Had this man sought advice when he first complained of a sensation of weight or fullness in his head, the free administration of the bromide of potassium or ammonium might have served as a prophylactic, if, at the same time, he had taken a brisk cathartic and ceased to work.

CASE II.—I was consulted in the early part of July, 1871, when the mercury ranged over 100°F., by J. A., et. 38, an American tinner, on account of severe pain and fullness in his head.

In July, 1853, at 10, A.M., while tinning a roof, he fell down insensible from sunstroke, but soon revived sufficiently to walk home, with assistance. Since then he has suffered from pain and dizziness every summer, and has been in the habit of douching his head for relief when the temperature has been high or when he has become greatly heated by exercise. After taking twenty-grain doses of the bromide of potassium, the symptoms of which he complained soon disappeared.

Remembering that the state of the cerebral circulation can be ascertained by the condition of the fundus of the eye, I examined the eyes of this patient, but was unable to detect any increased redness of either disc from capillary congestion, nor could I see that the arteries were more apparent or the veins more dilated or tortuous than in normal states of the brain. It is probable, however, that if experienced observers would examine the eyes of persons who have been sunstruck they would discover these and perhaps other appearances.

CASE III.—G. A., 12 years of age, and eldest son of the above, while bathing in a pond, in August, 1869, remained a long time exposed to the sun, and after his return home (a short distance), between 10

and 11 o'clock, A.M., became insensible, and did not recover consciousness until the following day. His attending physician considered the case a severe one of sunstroke. As pain in the head continued, he was kept from school for a year.

He now has the same pain when the weather is decidedly warm, and is disposed to stay quietly in the house rather than play with other boys. Before his attack of heat-fever he was a quick scholar and had an active mind, while at present he has a disrelish for all books and all mental effort. It is not improbable that certain brain-cell changes were developed by the disease, which, if more general, might have resulted in insanity.

## THE LAW AND CRIMINAL ABORTION.

By J. O. WHESTER, M.D., Lynn.

Much has been written about the prevalence of criminal abortion; its wickedness has been depicted in language none too strong, moral suasion and the terrors of religion have been exhausted in the vain endeavor to root it out, and meanwhile this curse of our civilization prevails as extensively as ever, perhaps more so.

Notwithstanding the flings that have been made at the medical profession in connection with this matter, by both the secular and the religious press, I think that we have not been remiss in our duty. Honored members of our profession have labored to enlighten the public with regard to the enormity of this crime, and their publications are scattered broadcast over the land, read but not heeded; and we expel from our Societies those of whose guilt we are morally certain, without waiting for legal conviction, but Christian families continue to employ the same men, and their popularity is rather increased by their reputation.

But these things are old; we have heard them repeated many times, and have no wish to dwell upon them.

My special object in writing this paper is to bring up a question that is often asked, and try to answer it. The question is this: Why are not abortionists punished? Every one knows how often a coroner's jury finds a verdict of "death caused by criminal abortion"; but how rarely the person charged with the crime is brought to trial. This is due to the fact that the kind of evidence usually available in these cases, although perfectly satisfactory to a coroner's jury, cannot be admitted in a court of law;

and this evidence is *the woman's dying declaration*. Now a dying declaration, from the solemnity of the circumstances under which it is made, would seem to have all the weight of an oath, and it was formerly admitted as evidence, if I mistake not, in all cases, criminal and civil; but this principle has been changed and is now stated as follows:—"They are admissible, as such, only in cases of homicide, 'when the death of the deceased is the subject of the charge, and the circumstances of the death are the subject of the dying declaration.'"—Greenleaf on Evidence, I., § 156.

The law of Massachusetts does not make a criminal abortion, when followed by the death of a woman, homicide; therefore the only evidence that exists, in most cases, with regard to the perpetrator of the crime, is inadmissible in court, the case is necessarily allowed to drop, and the guilty wretch, whose prototype was the fabled vampire fattening on the blood of its victims, goes scot free to continue his nefarious occupation—"the slaughter of the innocents."

This explanation is not fanciful or theoretical, but is given by one of our district attorneys as *the reason why*, in repeated cases, abortionists, of whose guilt there could be no doubt, were not brought to trial.

If the public, especially those entrusted with the making of our laws, occupied the advanced ground of our profession on this subject, this state of things would not exist. We have long held and expressed the opinion, nearly if not quite unanimously, that the criminal abortionist, even when the child only is sacrificed, and at however early a stage of its existence, is morally guilty of wilful murder, doubly guilty when the mother, too, loses her life.

Having shown the reason why the criminal abortionist is not punished, it is easy to suggest a remedy. With the law regarding abortion not followed by the death of the woman we would not interfere, for although the punishment is inadequate to the offence, any change would be useless, for the reason that these cases are hardly ever known to the legal authorities, and the opportunity of inflicting even the present penalty does not occur. But when the death of the woman does follow as the consequence of an abortion, we would make the crime *manslaughter*, thus allowing dying declarations to be admitted as evidence on trial, and, we confidently believe, resulting in the conviction of many of these

miscreants that the present law does not reach.

Manslaughter is, in law, "the unlawful killing of a man without malice, express or implied. This may be voluntary, upon a sudden heat or excitement of anger, or involuntary, but in the commission of some unlawful act."

We submit that the crime of which we are speaking comes fairly under the above definition, being the unlawful killing of a woman, in the commission of an unlawful act.

For the reasons above stated, we would have our honorable law-makers turn their attention to this subject, and make such an amendment to the law as shall make it declare that criminal abortion, when followed by the death of the woman, is manslaughter. This change would not increase the penalty for the offence, but would simply, as we believe, largely increase the certainty of punishment.

I think this matter has been brought before our Legislature in the past, but unsuccessfully; and we fear that even now public sentiment is not sufficiently awakened to the enormity of this crime to give us much reason to anticipate success from a new effort. But is it not worth trying for? The medical men of Massachusetts can exert a tremendous influence if they will; shall it not be exerted in favor of this important reform? Will not the Medical Society of our metropolitan district inaugurate the effort and endeavor to have petitions for this change signed by every practitioner in the Commonwealth and presented to the Legislature at its approaching session? I doubt not that the other district Societies would gladly coöperate in the undertaking, and that the physicians of Massachusetts would, for once, make it manifest that they are a power in the land. This would also be an effectual way of abolishing the suspicion, still lingering in the public mind, that we are disposed to tolerate abortionists—a suspicion that, if it ever had any foundation in fact, is now baseless.

#### THE CAUSES AND PREVENTION OF NEAR-SIGHTEDNESS.

By Dr. KAMPTZ, Surgeon of the Austrian Imperial Army.  
Translated by HENRY W. WILLIAMS, A.M., M.D.,  
President of the American Ophthalmological Society,  
Ophthalmic Surgeon to the City Hospital of Boston,  
from the Wiener Zeitung.

THE researches, prosecuted with great industry and untiring perseverance by Dr. Cohn, of Breslau, upon the refractive con-



dition of the eyes of 10,000 school children have led to this noteworthy result:—that in all the classes, from the lower schools up to the University, there was a great proportion of near-sighted pupils; and furthermore, that this anomalous condition was met with more frequently in the city than in the country schools, and in the higher more than in the lower classes. This general result appears little surprising; but the detailed statements respecting the percentage of these same classes, showing the enormous increase of the defect as they reach the higher schools, may well excite astonishment.

The village schools show but 1·4 per cent. of near-sighted children, the primary town schools 6·6 per cent., the intermediate schools 10·3 per cent.; in the higher schools the proportion reaches 21 per cent., while in the University it is 40 per cent., almost one half the whole number of students. From these reliable, carefully elaborated data the following conclusions necessarily follow:—

1st. That nearly the same proportion of near-sightedness will be found among all highly educated people.

2d. That the number of near-sighted persons must increase in rapid proportion with the raising of the standard of scientific cultivation.

3d. That with the presumptive increase of culture in the future we are on the direct road to become a generation of short-sighted people; unless, knowing these facts, we resolve to take measures whereby the tendency to excessive increase of learning, augmenting these defects of refraction to a hazardous degree, may meet with energetic opposition.

These considerations induce me to speak of the causes and the prevention of myopia, though I must content myself with a general sketch, as want of time does not permit me to treat exhaustively of the subject.

Before proceeding to the consideration of these questions, let me, for the sake of clearness, premise a concise explanation of the compass of vision in normal and in near-sighted eyes.

An eye is termed normal when it can unite parallel incident rays, coming from objects at an infinite distance, to a focus upon its retina, and form there distinct images of such objects. The focal point of these eyes is at the retina. A near-sighted eye unites parallel incident rays to form an image at a point in front of the retina, these rays reaching the retina only as circles of

dispersion. The focal point lies, in this case, in front of the retina.

Up to a certain point, termed the far-point, normal eyes are capable of forming a distinct image of approaching objects, without an effort of accommodation, notwithstanding an increasing divergence of the incident rays; because, from the shorter focal distance of the crystalline lens, an enormous difference in the distance of remote objects requires but a minimum variation of the focal point; because, even in a normal eye, on account of the differences of curvature in the different meridians of the cornea, we may speak of a focal line rather than a focal point; because, moreover, the eye is capable of neutralizing, to a certain extent, the circles of dispersion; and because, lastly, the material dimension of the retinal nervous tissue admits of a certain latitude in the formation of distinct images.

If, however, the divergence of the incident rays becomes considerable, on account of the approach of objects within a less distance than the far-point, the accommodative power must be exercised to adjust the focus, so that clear images may be formed on the retina. The agency of the accommodation begins at the far-point, and must be gradually increased as objects approach the eye from this point, reaching its maximum at the near-point. The distance between the far- and the near-point represents the range of distinct vision.

In short-sighted eyes the focal point lies in front of the retina; therefore objects must be brought nearer, so that the rays from them may fall upon the cornea with such a degree of divergence that clearness of the retinal picture may be obtained. The point at and from which images begin to be clearly defined for near-sighted eyes, is their far-point.

If objects are brought nearer to short-sighted eyes than their far-point, the accommodative power must be brought into play; but their range of clear vision lies nearer the cornea than in normal eyes. The normal eye sees clearly both distant and near objects; the short-sighted eye sees clearly only such objects as are between its far- and its near-point, whilst rays from things at an infinite distance, or beyond the far-point, are received upon the retina only as circles of dispersion, and do not form well-defined images.

The causes of near-sightedness depend generally on either an elongation of the optic axis or on an increased convexity of

some portions of the eyeball. This altered form, of the entire globe or of one of its parts, constitutes the anatomical characteristic of near-sightedness.

The entire series of causes of myopia may be divided into two anatomical groups. 1st. An elongated formation of the globe.

#### 2d. Posterior staphyloma.

These groups include all the conditions in which a lengthening of the optic axis is attended with a relative abbreviation of the natural range of vision.

At a certain period of foetal life the globe of the eye has an elongated form, which, as development goes on, is changed to a rounded, nearly spherical shape. It frequently happens that from arrest of development the elongated form persists until birth. In these cases the antero-posterior diameter, which may measure 17 lines, causes so great a prominence that even ordinary observers notice it, and the individuals in whom it is met with are designated as goggle-eyed.

Posterior staphyloma constitutes the second cause of elongation of the optic axis. This condition is characterized by a more or less conical projection at the posterior half of the eyeball, thus lengthening the axis.

These anomalies of form were first noticed by Demours and Ammon in 1814, and we have to thank Scarpa, of Pavia, for more precise descriptions of them. An account of a section of an eyeball by Ritterich, led Arlt for the first time to consider posterior staphyloma as an efficient cause of near-sightedness.

A clear proof of the influence of posterior staphyloma in producing myopia is afforded by the circumstance that this refractive condition sometimes changes year by year, the myopia being developed in one eye to a much greater degree than in the other—these differences resulting from the formation in one eye of posterior staphyloma. (Stellwag.)

The condition in question has its origin (according to E. Jaeger) in a small, circular zone of the inner layer of the sclera, anterior to the sheath of the optic nerve. The expansion usually begins at a point in the outer half of this zone, and advances from thence to the margin of the papilla of the nerve, gradually extending upwards and downwards in a crescentic form, and at a later period taking the shape of a pointed arch or an ellipse, or it takes an indefinite enlargement and at last completely encircles the optic papilla. These vari-

ously shaped cones may remain stationary at any stage of their development, or may increase slowly or rapidly; and the gradual increase of myopia year after year keeps pace with the enlargement of the staphyloma.

The choroid overlying the posterior part of the sclera and united to it, participates in its projection backwards, and is at last completely atrophied over the whole extent of the staphyloma, so that the clear white color of the sclera becomes visible to ophthalmoscopic inspection. Where the staphyloma is of recent date its groundwork is whitish red, with scattered patches of pigment and vascular spots.

The retina, lying loosely upon the choroid, except at the macula lutea, extends itself generally uninjured over a small staphyloma, and seems to give way only when this becomes larger or increases rapidly. But if the staphyloma assumes any considerable expansion, or its growth is rapid, the retina becomes more or less irritable, and extravasation of blood at the macula lutea, inflammation and separation of the retina, and disease of the vitreous humor may ensue.

We must perceive that posterior staphyloma is a condition from which by no means trivial consequences may ensue; which, in fact, may in many instances result in total annihilation of the visual function. The important question then arises, by what causes is it most often engendered?

E. Jaeger sometimes found, even in newborn children, well-marked changes of structure, high degrees of staphyloma being combined with coloboma of the eye, and with corresponding defects in other members of the same family; so that his conclusion that it is sometimes attributable to hereditary descent appears to be well grounded. This view is still further established through other and numerous researches of the same observer, according to whose data posterior staphyloma is excessively frequent in the descendants of near-sighted ancestors. He finds even that the aspect and the specific form of ectasia in mother and child, and even in each of several sisters and in both eyes of the same individual, are often surprisingly like those of the ancestors, or even exactly resemble them.

In the majority of cases the original seat of the posterior staphyloma is in the outer zone of the sclera, near the optic papilla, at the spot where, according to Ammon, the foetal fissure closes, and which offers less power of resistance to the intra-ocular pressure.

Another etiological condition is to be found, as observed by E. Jaeger, in the immediate proximity of the so-called posterior vascular circle to the optic nerve entrance; which, by its hyperæmia and by the serous infiltration of the neighboring tissues, favors the giving way of the parts least capable of resistance.

The positions of these above-named parts of the sclera which have least power of resistance, and of this vascular circle, predispose, in case of augmented intra-ocular tension, or of a hyperæmic condition at a certain point, to the production of staphyloma, and with it of short-sightedness.

I have said that short-sightedness may result; but we must observe that this condition and posterior staphyloma are not necessary factors of each other. Not seldom, indeed, the latter may be associated with hypermetropia, as I have repeatedly observed at the clinic of my respected teacher, Stellwag, and in my own practice. But this occurs in cases where an eye of an exceedingly short axis does not attain, even with the existing staphyloma, the length of the axis of the normal globe.

We should often fall into error if we should draw a conclusion as to the degree of myopia from the size of the posterior staphyloma, for an extensive staphyloma is frequently coincident with the lower degrees of myopia, and the converse. For an eyeball of elongated build may, in acquiring a slight crescentic staphyloma, attain a high degree of myopia, whilst in an eye of short antero-posterior diameter the myopia may remain very slight in spite of a strongly developed staphyloma.

Posterior staphyloma, sometimes congenital, is often acquired, and with it myopia, in consequence of overstraining of the eyes, especially where there already existed a congenital tendency to it. \* \* \*

As we now look over the portrayed series of causes of myopia, we find them made up in equal parts of congenital and acquired conditions. The question before us is as to the means by which we may bring about a rational prevention.

The best prophylactic method, where we have to do with congenital conditions, will be that which will hinder their increase. In acquired myopia such measures as may be successfully interposed against the known exciting causes will have the highest value. The inducing causes, leading to acquired, or to the increase of congenital near-sight, through the production of posterior staphyloma, or of a permanent increase of the convexity of the lens, are, especially, an

augmented intra-ocular pressure, a hyperæmic condition of the bloodvessels, and a too great demand upon the accommodative powers, and are originated—

- 1st. By bringing objects too near during continuous use of the eyes.
- 2d. By insufficient light.
- 3d. By unsuitable use of spectacles.
- 4th. By opacities of the transparent media.

To counteract these injurious influences must therefore be the basis of prophylactic treatment.

A principal cause of myopia is found in the too near approximation of objects while the eyes are employed upon small things, and are making use of a large share of their accommodative power and keeping up the increased convexity of the lens. The eyes are then liable to a hyperæmic condition and to augmentation of intra-ocular pressure, of which the last results from the action of the external muscles, the tension of the globe being augmented in proportion to the increased convergence.

A second cause is found in the continuous occupation of the eyes upon small objects, as in many trades, such as watchmaking, engraving, &c.; or in uninterrupted reading, writing, sewing, embroidery, or the frequent use of the microscope. Yet another cause is to be traced to the use of the eyes with unsuitable glasses, or by an insufficient light. The retina needs, as we know, in order to its sufficient excitation for the formation of images, a certain degree of intensity of light to give a sufficient illumination of external objects. We know, also, that the intensity of light must be, not in single but in quadruple proportion to the distance of the object. If, therefore, objects are insufficiently lighted they must be brought nearer the eye, and thus the whole series of morbid phenomena will be called forth. Similar consequences ensue from the use of very strong concave glasses, by which the virtual image is thrown very near the eye, at the cost of requiring a higher degree of the accommodative power.

Opacities of the transparent media, especially of the cornea, have also great influence as causes of myopia. The disturbances of vision accompanying these conditions become in some measure lessened by a very close approximation of objects, because thus many of the lateral rays of diffused light are cut off, whilst on the other hand the size and brightness of the retinal images is increased. (Stellwag.)

The means of preventing near-sighted-

ness, of which I here merely sketch the outlines, must consist chiefly in averting the mischievous effect of its exciting causes, by combatting them even in the family and the school, through such means as should be enforced by the government, in accordance with the advice of the profession.

We must first of all endeavor to make these important matters as clear as possible to the comprehension of the mass of the people by means of widely circulated popular articles, in which the injurious influences to which the eyes are exposed during the juvenile period should be described in detail. In every family preservative rules should be watchfully observed, in order that clear vision may be retained. It should be understood that a bent position of the head in study is hurtful; that the pursuit of certain artistic vocations will cause the eyes, if having a tendency in this direction, to become short-sighted; and that, therefore, a child having elongated eyeballs or posterior staphyloma should not be placed to learn trades which require long-continued occupation upon minute objects, such as watchmaking, lithography, engraving, &c.; and that all great or continued straining of the eyes, especially after severe attacks of typhoid, variola, scarlatina or measles must be avoided.

Special vigilance and attention should be exercised with regard to the children of the common schools, as well as those who are to be sent to the higher schools. The plans, the site, the lighting of the school-houses must be adjusted to meet the requirements of modern knowledge. The relatively too great height of the desks, and the imperfect lighting of our school-rooms, are great evils, because they lead to the bringing of objects too near the eyes, and thus involve the inordinate exercise of the accommodative power.

A school-room should be in a brightly lighted situation, and should have ample window spaces. The pupils should occupy seats with backs, and with desks of less than 45° of inclination, placed at a distance of ten to twelve inches from the eyes. The hours of study should be suitably regulated, and the injurious overburdening with home lessons diminished. Pale ink, bad type, too fine or too closely printed characters, too fine pens, too dark paper—in short, all those agencies which exert the above-described hurtful influences by creating a strain upon the eyes, should be done away with.

15 Arlington Street, August, 1871.

Norw.—In the last No. of von Graefe's *Archiv für Ophthalmologie* is an elaborate article by Dr. Fred. Erisman, of St. Petersburg, giving the results of the testing of the vision, and the ophthalmoscopic examination of the eyes of 4,358 children, by himself, in the schools of that city. His researches fully confirm the conclusions announced by Dr. Kampf; the number of myopic pupils being 80.2 per. cent of the whole, and the frequency of this affection being found to increase enormously in the higher classes in the schools. He says, "at the rate we are going on, a few generations will find us a universally short-sighted people."

H. W. W.

## Reports of Medical Societies.

NORFOLK DISTRICT MEDICAL SOCIETY. REPORTED BY C. ELLERY STEEDMAN, M.D., SEC'Y.

JULY 12th, 1871.—The President, Dr. C. O. Holmes, of Milton, in the chair.

*Cholera Infantum*.—Dr. CUSHING, of Dorchester, said he only pretended to give his own experience in Dorchester, where he had seen many cases; he had never made a *post-mortem* examination of one since 1847, when he found the appearances to correspond exactly with the description given by Barth and Billiet of enterocolitis; the large intestine being indented with ulcers looking as if they had been punched out of the mucous membrane—showing the little benefit to be gained from astringent injections. The disease was arbitrary in its selection of localities—sometimes being limited to Meeting-House Hill, or to Savin Hill, or to Commercial Point, a tract of fifteen or twenty acres surrounded by tide-water; here he had known it to invade almost every house, six doctors having been seen on the Point at one time, dysentery raging at the same season. The circumstances of wealth or poverty, neatness or filth, seemed to make little difference as causes of the disease. In making the diagnosis, it must be discriminated from diarrhoea and dysentery, or mechanical irritation which a Rochelle powder would carry away. The symptoms, familiar to all, he would not dwell on. The severity of the diarrhoea bore no ratio to the urgency of the disease. The received tradition was that babies should not be weaned just before the season when cholera infantum prevailed, but he had found babies



reared on the bottle fare as well when attacked by the true disease as those at the breast. Some die after a few hours' illness. As to treatment, he had tried everything, but dreaded the malady as one over which remedies had no control, and palliation was our only resource. He thought, however, that he lost fewer cases than he used to. For the pain he gave opium in the form of Dover's powder, only to procure comfort and sleep. Fomentation of the abdomen was of great use. He made no effort to check the discharges, but tried to nourish and stimulate the patient, and had found *tea* (common black tea, which, with coffee, was too little esteemed by the profession as a stimulant) to serve an admirable purpose when added to boiled milk. This, with light effervescing wines or cider, when alcoholic stimulants are needed, raw meat, change of air in chronic cases, the frequent need of a little soda in the milk, were what twenty years of experience had confirmed him in the use of.

Dr. MCGREGOR, of Wrentham, remarked on the wide extent of the nomenclature, and the causes of the disease. He was in the habit of using Dover's powder, or paregoric fomentations to the abdomen, heat and friction to the spine; often a light mercurial was demanded, while the diet was limited to arrowroot, raw meat, or boiled milk.

Dr. TUCKER, of Stoughton, for the last few years when called to a child prostrated and vomiting, had been in the habit of giving small doses of wine and water, or according to circumstances an eighth to a quarter of a grain of calomel ground up with sugar of milk. A favorite formula of his was ten grains of bicarbonate of soda in fifteen teaspoonfuls of water, giving a teaspoonful once an hour. Three times out of four this will speedily check the vomiting. A sinapism to the stomach, or, in protracted cases, a cloth dipped in brandy did good service. He thought more highly of a strict milk diet than he did twenty years ago, and when milk was omitted, cream would frequently be borne. Beef tea, rice water, gum water and arrowroot were among our other resources.

Dr. FORSAITH, of Weymouth, considered the primary fault in these cases to be one of assimilation. He did not rely on opiates or astringents, but tried to stimulate the digestion. Pepsine was often of great value in bringing about a better look to the matters passed. Cream that has stood three or four hours, reduced with boiling water, condensed milk, the pulp of raw

meat in small quantities—he had used all with success. As to the danger of tænia from the raw meat, he had never observed such a result. An admirable counterirritant was chloroform applied to the epigastrium; its effect on vomiting was superior to that of mustard. In reply to the President, he believed the powder of pepsine to be the only reliable preparation.

Dr. E. G. MONROE, of Roxbury, had used Tully's powder with satisfaction, ten grains of which contained one-sixth of a grain of morphine.

Dr. GILBERT, of Dorchester, classed as *Cholera Infantum* only the cases of decided and sudden prostration, which he had been led to look upon as owing to change in the nerve centres. He had treated some cases with Dover's powder or morphine, in quantities sufficient to arrest all irritation, so that the little patients were narcotized for twenty-four or thirty-six hours. Of course they must be narrowly watched—fomentations applied, and nourishment of bland fluids given; at the end of the time above named more normal action is established. A child last summer had successive severe attacks, each one of which was thus relieved, though at last it was worn out and died with dysenteric symptoms. A remedy new to him was told him by Dr. Dodd, of Prince Edward's Island:—after an opiate, equal parts of linewater and the best salad oil, a teaspoonful every two or three hours. On trying it he was surprised to find it would not only stay on the stomach, but in three cases it also seemed palatable.

Dr. FOOTE had had less trouble with this intractable malady than others of his brethren, South Dedham not being often subject to its visitations, never as an epidemic. One could not lay down an unvarying course of treatment. He had little to add to what had been said about it. He had not used Dover's powder for ten years, preferring Tully's, which was a better sudorific and tasted nicer.

Dr. HITCHCOCK, of Foxborough, alluded to the good results sometimes obtained from sulphite of lime.

Dr. MONROE, of Medway, had to confess that he was not satisfied with the results of treatment in this disease, so fatal, rapid, and uncontrollable, which began with exhaustion. He believed that the giving of an anodyne at bed-time was less effective than smaller doses every two or three hours. Tully's powder was the best. Its composition was:

PULVIS TULLII.—Morphine Sulphatis, gr. x.; Pulv. Camphoræ, Pulv. Rad. Gly-

cyrrhizæ glabræ, Pulv. Calcis Carb. prep., aa gr. cc.

Each ingredient to be reduced to an impalpable powder separately, and then carefully and intimately combined. The prepared chalk should be of the first quality, like the English, and *not* the ordinary American article. Sugar by no means takes the place of liquorice. It was more acceptable to patients than Dover's powder, though more bulky. Ten grains was a heaping teaspoonful, and contained one-sixth of a grain of morphine. Sometimes patients disliked the camphor, but he seldom gave more than five grains even to an adult. He added his testimony to the value of raw meat in certain cases. The oil and lime-water mentioned by Dr. Gilbert was new to him, and he thought it a good idea. As to arrowroot he had no faith in it whatever; a patient confined to it will sink, as one of his did; the child would keep nothing else on its stomach, and if anything were substituted vomiting recommenced; returning to arrowroot, the child began to starve again, and continued to fail till something was discovered which the stomach could tolerate. In addition to its intrinsic worthlessness, the article was generally adulterated.

The President said that most arrowroot was potato-starch.

Dr. CUSHING referring to something that had been said about cerebral symptoms in this disease, remarked, that in the autopsy of a child dead of such symptoms, no pathological changes could be traced in the brain.

Dr. CAMPBELL, of Roxbury, alluded to such symptoms as those classed by Marshall Hall as hydrocephaloid.

Dr. CORTING, of Roxbury, was gratified to find that members of the society had taken refuge at last in skepticism. That like him they put diagnosis in the first rank. He was in the habit of separating the disease from the diarrheas, and dividing it into acute and chronic—though a seeming contradiction it might be chronic “from the start.” It will sometimes remove a little patient in forty-eight hours, when it was apparently doing well. It was a disease belonging to summer, though not confined to one part of that season. As to treatment—nourish, abate distress, hinder from dying. After death there is little to be found, except patches of redness in the small intestine—the jejunum—and no effusion in the head. In the chronic form, lower down in the bowels, extensive ulcerations sometimes were seen from long con-

tinued diarrheas; “bottled-babies” were oftentimes affected, and a wet-nurse was frequently the best remedy. Some form of milk with an alkali, and an opiate, were almost always needed. A preparation used in Roxbury, of arrowroot, sugar, and laudanum, one drop to four grains, was recommended. Tea was doubtless a good stimulant.

Dr. A. R. HOLMES, of Canton, in addition to what others have said and recommended, testified to the benefit of flour-porridge, strained, and beef-juice extracted by heat without water in the bottle.

Dr. JONATHAN WARE, of Milton, said that the result of his experience of fifty years was, that he never expected to cure this disease; he had tried everything, heroic and the reverse. The disease was peculiar, bearing no resemblance to anything but cholera. It was not teething; the remote cause was atmospheric, the exciting cause starvation. When the infant cannot get mother's milk, you must procure for it the next best thing you can. A severe frost always stops it.

Dr. CORTING wish that the last fact stated by Dr. Ware accorded with his own experience.

Dr. TUCKER remarked on the benefit which resulted from a change of climate; sometimes a move of only five miles will revive an infant which seemed beyond hope.

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## Medical and Surgical Journal.

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BOSTON: THURSDAY, AUGUST 31, 1871.

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### CORONERS.

“But is this law?”

Aye, marry is't; crowner's-quest law.”

—HAMLET.

We have had it in mind for some time to bring before our readers the question of the appointment to the office of coroner of persons manifestly unfitted to perform the often intricate duties of that position. Our attention has recently been called anew to the subject by several members of the profession.

The appointment of *honest*, scientific and capable coroners has long been mooted in England, and with good effect; we are gratified to know that an agitation of the same views has been inaugurated in our own secular papers, and our medical jour-

nals should not be behindhand in urging upon the Executive to place in office men on whom we can rely for wise and faithful investigation of subjects often fraught with great importance to the life and happiness of members of our community. We do not intend to allow the matter to sleep; but, for the present, think it well to place before our readers a communication written for one of our lay cotemporaries, in which the question has been well handled. Truly our neighbor the *Boston Pilot* says:—

"The verdicts given by some of these responsible gentlemen will in future time form a valuable *morceau* for the historian of the Curiosities of Literature."

The leading article in a recent number of the *Boston Daily Advertiser* thus ably treats the subject:—

"A recent letter from our correspondent at Naples, in illustration of the abuses and dark ways attendant upon the administration of justice in Italy, gave a graphic sketch of a case in which a sudden death from apoplexy, a meddling priest, a suspicious police, a bungling autopsy, a pot of aconite pomade, a newspaper sensation, an incompetent or dishonest judge, the suppression of direct and the distortion of circumstantial evidence, combined to induce an ignorant jury to find an innocent man guilty of 'paricide, with extenuating circumstances,' and to cause him to be condemned to the galleys for life. Few readers, probably, finished the tale without a feeling of gratitude that they lived in a land where such a state of things was impossible, or would not have been scandalized at the suggestion that such a record of official incapacity, of disregard of the laws of evidence, and of aspersion of the character of the living and of the dead, under the cover of judicial forms, might be paralleled in our own city of Boston, though fortunately on a less magnificent scale, and without the tragic results of the case in question.

"About the time our correspondent's letter was published, the daily press of this city chronicled a first-class sensation, the material for which was furnished by the sudden death of a woman at the South End, coupled with promises of 'strange developments' and 'startling disclosures' before the coroner who was holding an inquest with regard to the 'mysterious death.' The nine days' wonder terminated, however, by a verdict in which it was stated that the wo-

man 'came to her death by an indiscreet use of morphine, administered by her own hand,' which undoubtedly failed to satisfy the minds of those incredulous persons whose curiosity and love of excitement had been stimulated by the dark hints and significant innuendoes previously circulated with regard to it. It is not proposed to enter into the details of this case further than to state that a proper investigation would have shown the death to have been the result of natural causes; and that the report of the autopsy, laid before the coroner, contains no indication of any sign by which any competent physician would be led to infer poisoning by morphine.

"But the serious importance of this case is enhanced by its being by no means a solitary specimen of its kind. An inquest in the case of a man who died at a police station on the 6th of July, resulted, under the auspices of the same coroner, in a verdict, which, addressed to a larger public through the columns of most of our cotemporaries, deserves more than a passing notice. After stating that the deceased, Michael Beardon, died at Police Station No. 5, of pneumonia, and paying a tribute to the captain and officers of the station, which, doubtless, is appreciated at its full value, the verdict proceeds to state that 'said Beardon had applied to the City Hospital for admittance, and was refused. He then applied to the Captain of Station 5 on the morning of the 5th of July, and the Captain sent Beardon to the City Hospital in charge of an officer, when he was again refused admittance in a dying condition. And the jurors further find it to be their duty, inasmuch as the hospital is an institution supported by the citizens of Boston, to recommend to the trustees that they see to it, that a proper person as admitting physician be placed in charge; as it is in evidence that said Beardon might have been relieved of much suffering, had he received that care and treatment as a citizen and a human being he was entitled to.' That such a distinct charge of inhumanity, in such a quarter, could not be made so solemnly and proclaimed so widely without exciting the deepest feeling of indignation in the thousands who read it cannot for a moment be doubted. But how many of these thousands are likely to notice any explanation or any denial of such a charge? Explanations involve details which the general reader detests. Denials appeal to none of the emotions in which the public delights. For this reason we have delayed calling attention to the verdict containing this charge

until the evidence on which it purports to be based should be accessible. It having been returned to the office of the Clerk of the Superior Criminal Court of this district, where it may be consulted by all, we do not hesitate to assert:—

"First, That there were no depositions and no evidence before this coroner which warranted this charge.

"Second, That at no time, on no occasion and under no circumstances, was Michael Reardon refused admission to the City Hospital by any officer or by any person connected with that institution.

"We do not care to discuss any of the reasons which led to the putting forth of this verdict. It may be stated, however, that it was foreshadowed, and the person against whom it is directed was named, in an article published a week previous to its being rendered, in the *Saturday Evening Express*—a weekly paper which it is not impossible may be unfamiliar to most of readers. But it concerns the community that such verdicts as those cited above be rendered impossible in this Commonwealth. The power exercised by a coroner is greater than is generally known, and too great to be placed in incompetent or dishonest hands. He selects the jury, the witnesses, and the method of procedure. With the consent of a majority of the jury, so selected, he may make the inquest a secret inquisition. Untrammelled by superior authority, if restrained by no scruple, he may bring forward or suppress testimony according to his pleasure; and, once authorized to act in any case, he has the supreme control, for the time being, over an investigation which may involve the peace and safety of the living, as well as the honor and good name of the dead.

"Who can read the invocation in the Litany, to be delivered from sudden death, without the thought that what has happened to others may befall him? There is no one among us that may not be struck down at any moment. If he be poor and friendless, whose voice shall be raised to defend his memory? Lord Brougham used to say that for a Chancellor of England death had another sting, in the thought that if he died before Lord Campbell the latter would put his biography into his Lives of the Lord Chancellors. Campbell died before Lord Brougham, but the latter was no sooner buried than the doubly posthumous life of him by Campbell was published by the heirs of his rival, who looked forward to victory, even in the grave. Let us be thankful that it is impossible, in the nature of things, for

any coroner to foresee the sudden death of any individual or to leave behind him a posthumous verdict."

The following is an abstract of some remarks made by Prof. J. C. Dalton, upon the "Formation of Sugar in the Liver," in a paper read before the New York Academy of Medicine.

The present condition of our knowledge on the glycogenic function of the liver is as follows: it is an acknowledged fact, that the liver of healthy animals, when examined after death, contains glucose or grape sugar, and that this sugar is produced after the circulation of the blood has ceased; that even after the liver has been taken from the body and washed by a continuous stream through the hepatic vessels, it will re-appear; and that it is produced by the glycogene under the influence of the animal ferment; all these facts have been confirmed beyond a doubt by numerous experimenters. He remarked further, that, two years ago, wishing to ascertain the exact time within which glucose would fail to appear in the liver-extract examined by the ordinary method, he experimented upon dogs, by cutting out portions of the liver and slicing it into boiling water, and making an extract of the coagulated liver, by rubbing it to a pulp in a mortar, and treating different portions of this by boiling with pure water, boiling with sulphate of soda in an excess, and lixivating with cold water through powdered animal charcoal. In one instance, the preliminary operations occupying twenty-two seconds, the final extract gave no reduction of the copper test, but at the end of fifty seconds it gave slowly a distinct though not abundant indication of sugar. In one instance, different parts of the same liver were treated with boiling water and animal charcoal at the end of seventeen seconds, one, two, three, four, five and seven minutes successively; in the first instance (seventeen seconds) it did not reduce the copper test, in the second the indication was slight, in the others more marked.

Therefore, from these results it seems that fifty seconds after removing the liver from the body is the shortest time within



which it will give indications of the presence of sugar. But these experiments were not satisfactory, because the glucose appearing with such rapidity after death, led him to question whether it was not there in minute quantity before death. Therefore the query arose whether the sugar was an increase of a substance already in the liver, or a *post-mortem* production.

Furthermore, it must be remembered that chemical tests all have their limit in point of delicacy, and therefore may fail to detect glucose, it being in such a minute quantity. The most delicate test, however, is that by Fehling's solution, which is a double tartrate of potash and copper dissolved in an alkaline solution, containing in a given volume a given quantity of copper.

Dr. Dalton experimented with twenty dogs, using this test; in four cases the liver was placed in boiling water, and in sixteen in alcohol immediately after removal from the body: the longest time that elapsed from the separation to the immersion in boiling water or alcohol being thirteen seconds and the shortest time six and a quarter seconds, and in every instance the final watery solution gave a decided sugar reaction.

Therefore, the conclusions he arrives at are these:—

I. Sugar exists in the liver at the earliest period at which it is possible to examine the organ after its separation from the body of the living animal.

II. The average quantity of sugar existing in the liver at this time is at least two and a half parts per thousand.

III. The liver-sugar thus found does not belong to the arterial blood with which the organ is supplied, but is a normal ingredient of the hepatic tissue.

We are sure the following letter, on a subject of interest, will be read with pleasure by the profession:—

NEWBURYPORT, August 22, 1871.

SIR:—I noticed in your Journal of August 17, an account (copied from the *New York Medical Record*) of some microscopic observations, made by Dr. Frank H. Davis, of Chicago, Illinois, in the way of collecting the organic matter of germs in the presence

of typhoid and typho-malarial fevers, erysipelas, scarlatina, &c., where the record, in my opinion, is not quite satisfactory, for the reason that the powers employed by the observer are not given.

A similar remark may be made in relation to the results of Dr. Lewis's examination of choleraic discharges, under a power of 600, which is altogether too low to view any of Hallier's micrococci. Lisseur is said, in nineteen cultures with vaccine lymph, after Professor Hallier's method, to have failed fifteen times in obtaining any fungi whatever.

May I be permitted, through your Journal, to state that, in company with a friend, I have repeated Hallier's cultures with kine-pock lymph, sown upon different substrata, and have obtained all the fungi he found at Jena, viz.: *Penicillium*, *Aspergillus*, the bastard forms between these two fungi, *Mucor Oidium* and a *Torula*, together with *Micrococci*, *Cryptococci* and *Arthrococci*; and have seen under a power of 1800 the moving corpuscle in the fresh kine-pock lymph taken from a vaccine vesicle on the arm of an infant. So that I am more inclined than ever to believe in a *material* cause of several diseases, which awaits discovery by the diligent and persevering student of nature, and am prompted to address you for the purpose of calling the attention of the younger and elder microscopists to this interesting field of inquiry.

A translation of Professor Hallier's "Parasitologic Investigations upon the Vegetable Organisms found in Measles, Typhus Abdominalis, Typhus Exanthematicus, Smallpox, Kine-Pock, Sheep-Pock, Asiatic Cholera, &c.," has been prepared, together with a detailed account of our cultures and their results, for the publication of which it is hoped permission may be obtained of the professor. Respectfully,

H. C. PERKINS, M.D.

#### TREATMENT OF POISONING BY CARBOLIC ACID.

—Mr. Charles Roberts remarks that the indications for treatment are to remove the poison from the stomach as speedily as possible, to neutralize its action, and to treat the general symptoms of collapse in the ordinary way. A mixture of olive oil and castor oil has been recommended, and employed in some cases, with the object of diluting and carrying off the poison by the bowels, on the theory that it acts only as a corrosive, and is not absorbed. As we know that it is absorbed, it would be doubtful practice to continue this treatment and

to make the acid run the gauntlet of the fat absorbing surfaces of the small intestines. As carbolic acid is very slightly soluble in water, probably the speediest and most effectual way of removing it mechanically from the stomach would be to administer large quantities of warm water, or of mustard and water. As it is very soluble in glycerine, that substance with water and sulphate of zinc might be employed after the bulk of the poison had been removed by the former plan. From the serious action of the acid on the mucous membrane, the stomach-pump should be employed with great care, and probably would often be inadmissible. Mr. Roberts states that he knows of no substance capable of neutralizing the acid chemically, but its well-known affinity for albuminous compounds would point to eggs and finely mixed or powdered raw meat as likely to prove of service. If eggs were used, it would be necessary, for obvious reasons, that they should be very much diluted by being whipped up with milk or cold water. Milk is not coagulated by carbolic acid, and therefore would not act as a neutralizer, but it would be a more suitable application than oil to the injured mucous membrane, and less likely to produce further discomfort to the patient. The general symptoms of collapse must be treated in the usual manner by internal stimulants, and friction and warmth to the skin. The rectum would be the most suitable part to which stimulants should be applied. If raw meat were given, it might be well seasoned. As brandy dissolves carbolic acid, and is itself speedily absorbed, its administration by the stomach would be contra-indicated.—*British Med. Journal.*

**MICHEL'S PROCESS FOR REMOVING EXTERNAL TUMORS.**—William A. Bell, M.A., of London, gives an interesting account of the mode of operation for the removal of tumors practised by a French charlatan, for a knowledge of which Mr. Bell paid no less a sum than 25,000 francs, and which, having now obtained complete information, he has very properly and liberally made public. The preparation used in all cases where the tumor can, with safety, be reached externally, is made in the following way: Asbestos, as soft and free from grit as possible, is reduced by rubbing between the hands to the finest possible fleecy powder. It is then mixed thoroughly with three times its own weight of strong sulphuric acid ( $\text{S O}_3 \text{ H O}$ ). A mass is thus formed which may be easily worked with a silver or

gold spatula into any size or shape corresponding to the tumor to be destroyed. Any malignant growth of the breast which is detached and solitary, with the submaxillary glands unaffected, is suitable for treatment, whether open or not makes no difference. In the application of the caustic the adjoining healthy parts of the skin are carefully protected by applying a zone of collodion and pads of linen, and the patient is so placed that the surface of the tumor is perfectly level. The saturated acid asbestos is then laid on the surface to the thickness of half an inch for a tumor the size of a hen's egg. Rapid destruction of the tissue follows, with, after the first half hour or so, but little pain. An oozing of clear watery fluid appears, which must be carefully sopped up. After twelve or fourteen hours' action the first application is to be removed, and a new portion of smaller size adapted to the sore. After this has been applied for twelve hours the operation is complete, and the healing of the deep excavation alone requires to be attended to, for the details of which we must refer our readers to Mr. Bell's pamphlet. Mr. Bell does not pretend to say that this mode of operation will effect a permanent cure of cancerous cases, but he thinks that the plan presents various and considerable advantages over extirpation by the knife, as in producing much less shock to the system, in removing the tumor alone with but little of the surrounding breast, and in postponing, in malignant cases, for a longer period the recurrence of the disease.—*Detroit Review of Medicine and Pharmacy.*

**CASE OF POISONING FROM THE BITE OF A RATTLESNAKE.**—J. H., a young man living at Point Pleasant, N. J., had a habit, when he saw a snake lying in his path, of catching it by the tail and cracking its head off. By mistake he "caught a Tartar" in the form of a young rattlesnake, and was bitten through the finger before he could accomplish his purpose. Dr. Robert Laird, of Squaw Village, N. J., saw him an hour afterward and found him in convulsions, finger and hand swollen, pulse intermitting, eyes glaring and bloodshot, teeth set. He immediately placed a tight ligature about the wrist, scarified and cauterized the wound, and applied a poultice of strong ammonia and tobacco. The patient, before the doctor's arrival, having taken half a pint of whiskey, he gave him a hypodermic injection of morphine. The convul-

sions still continuing, he pried open his mouth and gave him gr. xx. of hydrate of chloral every ten minutes; after taking the fifth dose the convulsions ceased, he sank into a deep sleep of several hours' duration, and afterward had no more of them. Three days afterwards he was sitting up, convalescent.—*N. Y. Med. Record.*

EXAMINATIONS FOR LIFE INSURANCE.—Dr. S. M. Bemiss, of New Orleans, La. (*Am. Practitioner*), publishes a unique case of sudden death of an applicant for life insurance. The patient, aged 61, was examined three days before his death, and in a letter to the home office of the St. Louis Mutual Life Insurance Co., Dr. Bemiss wrote that he had discovered an abnormal sound accompanying the heart's systole. It was very distinct over the apex and upward over the uncovered portion of the heart. The murmur was somewhat rough in character. The lesion was thought to be a mere roughening of the endocardial surface, without valvular insufficiency. The applicant retired at night to his state-room on board the steamship, while at sea, and not making his appearance in the morning, his friend found that he was dead. No *post mortem* was made, and the body was buried at sea.

Dr. Bemiss says that the following conclusions appear to him to be fairly deductible:—*First*, that the innocuous and tolerated cardiac murmurs cannot be discriminated from those which are mischievous and dangerous, except in rare instances, and then only after long-continued and most careful observation. *Second*, these "rare instances," in which, even after the most satisfactory observation, we may venture a favorable prognosis with any feeling of confidence, are restricted to that class of patients whose youth and health exclude any liability to degenerative changes in the heart's tissue. *Third*, that in any event or under any circumstances the medical examiner for an insurance company is obliged to give his employers the benefit of his doubts, and therefore to disapprove all applications from parties who are found to have organic heart-murmurs, although by such a course he may occasionally do an applicant injustice.—*Ibid.*

DIGESTED MILK. By JAMES MORRIS, M.D.—As you have just spoken of digested or fluid meat in your journal of last week, your

readers may perhaps be interested in the cognate subject of digested milk. I do not remember to have seen this mentioned in your pages. To whom the original idea is due I do not know, but to me it came from Sir William Jenner. He recommended that a trial should be made of it more than four months ago in the case of an infant at that time in a most precarious state. The only other child of the same mother had died under similar circumstances at about the same age, six months. The milk used was asses' milk; the pepsine that of Messrs. Bullock, Hanover Street—the proportions, as calculated by Mr. Bullock, being as follows: Asses' milk,  $\mathfrak{z}\text{v}$ .; pepsine, gr. v.; dilute hydrochloric acid,  $\mathfrak{m}\text{xxx}$ . These ingredients were digested together for two hours by the heat of a water-bath at the temperature of  $120^{\circ}$  Fahr. The acid was then neutralized by carbonate of soda, gr. xij., and the solution then filtered. It had always a slight bitterness, but this was covered by sugar, and at first, also, by a little brandy, which was then needed. At first this quantity was prepared twice daily; after a short time a double quantity twice, the child being able to take more food. Still later, other infants' food was given, but this had to be omitted again and again, from failure to digest it. After persevering with the artificially digested milk for more than three months the child at last became strong enough to take ordinary food, and is now in fair health. Cows' milk was tried occasionally, but it was found that unless more pepsine and acid were used much curd remained upon the filter. The removal of this is, perhaps, not a disadvantage. This case has strongly impressed me with the advantage of the artificial digestion of milk for suitable cases.—*London Medical Times and Gazette.*

THE BROMIDES IN THE TREATMENT OF THE SUMMER COMPLAINTS OF CHILDREN.—Dr. F. G. Williams (*Chicago Medical Examiner*, June, 1871) has had great success in the treatment of these affections with the bromide of potassium, given in from one-half to two-grain doses, and repeated every one, two or three hours, according to the age of the patient and the symptoms presented by him. The bromide may be given dissolved in a little syrup of rhubarb, to which a small quantity of sulphate of morphia may be added in cases in which there is much pain or restlessness.—*Philadelphia Medical Times.*

## Medical Miscellany.

"THE POETRY OF LABOR."—The following verses, on the "Poetry of Labor," were written by a student in the Medical Department, University of Nashville, last winter, and laid upon the table of the Professor of Obstetrics:—

"The fetal head should first be flexed,  
In order to descend;  
And after that it does rotate,  
And then it does extend.

"Then restitution should take place,  
Before the work is done,  
Expulsion soon will give to us  
A daughter or a son.

"Will every one attention give,  
And not refuse to sing;  
For we should all, respected sirs,  
Appreciate this thing.

"Then sing aloud, dear brethren all—  
Sing with a cheerful voice,  
And when the child begins to squall,  
Let every heart rejoice."

—*Medical Investigator.*

We are glad to be able to again record the success of Prof. Halford's treatment of snake-bite by injection of ammonia into the veins. In Tasmania, a woman, having been bitten six hours previously, was insensible, cold, and apparently sinking. Dr. Appleyard injected thirty drops of liq. ammonia, B.P., sp. gr. 959, into a vein of the arm. The effect was magical—she roused up directly, and very soon afterwards was perfectly recovered. Again, a man was bitten the other day at Schnapper Point, and when the Doctor arrived, one hour and a half after the bite, the man was perfectly insensible, the limbs paralyzed, the pupils of the eyes dilated, the countenance dusky, and the skin covered with a profuse clammy perspiration. Within twenty seconds of Dr. Dimock injecting the ammonia into a vein of the arm, the man jumped suddenly up, as if electrified, and stared about him; his pupils began to act, and his skin to get warm, and in two hours he was removed home. Dr. Dimock has since expressed himself as follows:—"I have no hesitation in saying that the preservation of this man's life was entirely owing to the ammoniacal injection.—*London Med. Times and Gazette.*

PRESERVING ANATOMICAL SPECIMENS. By Dr. EHRHARDT.—The simplest means of preserving anatomical and pathological preparations is the use of the following solution: saturated solution of alum, 100 grammes; saltpetre, 2 grammes.

The article to be preserved is immersed in the solution, when it becomes decolorized; but in a few days the color returns, when it is taken out of the solution, and kept in a saturated solution of alum and water only.—*Med. Gazette.*

INNOCENT AND MORBID GROWTHS.—J. N. Danforth, M.D., Chicago, Ill. (*Chicago Medical Journal*), in a paper on the "Microscopic Appearances of Cancer-cells," lays down the following simple rules for drawing the distinction be-

tween innocent and morbid growths:—"Whenever a description of one of the cells of a microscopic specimen is a description of all of its cells, the chances are as ten to one that it is not cancer; whenever, on the other hand, the cells of such a specimen are so varied in form and size that philology and ingenuity and imagination, and the most unflinching resolution combined, utterly fail to accomplish the task of describing them, the chances are as ten to one that the specimen is from a malignant growth, whatever may be its name or location.—*N. Y. Med. Record.*

A CURIOUS REQUISITION.—A correspondent informs us of a "requisition" which can scarcely be recorded in any other than a medical journal. A staff-officer, in full dress, with white gloves, presented to the town of Moulhouse a demand for injection syringes and several kilogrammes of balsam of copaiba, which were sent in some days afterward. "History," says the Emperor William, in his address to the German Parliament, "will register the mighty deeds of the Prussians."—*Lyon Médicale.*

SIR G. JENKINSON has introduced a bill in the British Parliament to substitute a lighter punishment than death, for mothers convicted of destroying their infants under a week old.—*Dublin Medical Press and Circular.*

### Deaths in sixteen Cities and Towns of Massachusetts for the week ending August 26, 1871.

Cities and Towns.	No. of Deaths.	Prevalent Diseases.
Boston . . . . .	129	Cholera infantum . . . 56
Charlestown . . . . .	16	Consumption . . . . . 38
Worcester . . . . .	27	Dysentery & Diarrhoea . . 15
Milford . . . . .	7	Typhoid fever . . . . . 10
Chelsea . . . . .	5	Pneumonia . . . . . 10
Cambridge . . . . .	14	Scarlet fever . . . . . 6
Salem . . . . .	9	Croup and Diphtheria . . 6
Lawrence . . . . .	5	
Springfield . . . . .	4	
Lynn . . . . .	18	
Gloucester . . . . .	5	
Fitchburg . . . . .	4	
Newburyport . . . . .	6	
Somerville . . . . .	7	
Fall River . . . . .	13	
Haverhill . . . . .	2	
	271	

GEORGE DERRY, M.D.,  
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, August 26th, 129. Males, 57; females, 72. Accident, 2—ascites, 1—apoplexy, 1—inflammation of the bowels, 4—disease of the bladder, 1—bronchitis, 5—congestion of the brain, 1—disease of the brain, 3—cancer, 4—cholera infantum, 24—consumption, 20—convulsions, 5—croup, 1—cyanosis, 1—diarrhoea, 7—dropsy of brain, 1—drowned, 1—dysentery, 1—diphtheria, 2—exhaustion, 1—scarlet fever, 1—typhoid fever, 3—rupture of gall-bladder, 1—disease of the heart, 3—disease of the kidneys, 4—disease of the liver, 2—inflammation of the lungs, 4—marasmus, 10—old age, 1—ovariitis, 1—paralysis, 2—pleurisy, 1—premature birth, 1—peritonitis, 1—spina liffida, 1—scrofula, 1—disease of the spine, 1—syphilis, 1—tumor (ovarian), 1—whooping cough, 2—unknown, 1.

Under 5 years of age, 65—between 5 and 20 years, 13—between 20 and 40 years, 22—between 40 and 60 years, 18—above 60 years (one aged 101), 11. Born in the United States, 90—Ireland, 27—other places, 12.